IMPLEMENTATION OF HPV PRIMARY SCREENING IN NORWAY

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ECC 2016 in Liverpool, UK
The Norwegian Cervical Cancer Screening programme (NCCSP)

- NCCSP is run by the Cancer Registry (CR) of Norway, in collaboration with the Norwegian Institute of Public Health and the Norwegian Directorate of Health
- Screening every three years from 25 – 69 years
- Reminder-based: The women receive a letter from the CR, and then she make an appointment with her GP or Gynaecologist to take a Pap smear.
  - Coverage: 74 % after two reminders (2015)
- Centralised registration and monitoring of all cervical cytology, HPV-tests, cervical histology and treatment of CIN lesions and cancer (mandatory by law)
- Approximate numbers per year: 400 000 cervical specimens, 3000 precursor lesions and 300 incidences of cervical cancer
<table>
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<th>LBC- HPV- vaccine</th>
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<td>Liquid based cytology in 2005, nationwide in 2016</td>
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<td>Bethesdaclassification from CIN to SIL in 2005</td>
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<td>HPV-test as triage to ASC-US and LSIL in 2005</td>
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<td>HPV vaccine for girls in the child vaccination program in 2009</td>
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The Norwegian Screening program against cervikal cancer
The National Council for Priority Setting in Health Care said yes to:

**HPV primary screening for women 34 – 69 years**

**Screening interval: 5 years**

The project must provide knowledge about distinctive Norwegian conditions regarding the scope of HPV infection and the basis for assessing whether more cancers can be prevented. The evaluation should also provide information on how this screening is received in the population and how it can best be applied.
Report from Group Future 2013

The group focused on future organisation of cell samples in laboratories with emphasize on quality.

They suggested that the number of cytology laboratories should be reduced from 19 to 4-5 when HPV primary screening is fully implemented.
HPV test in primary screening - many group processes

Tender for HPV-test and instrument 2014

A group with members form the three laboratories involved contributed in making requirement specifications

• Expert panel 2014-
  – QA the work of the practical preparing group
  – Elaborate a revised study protocol focusing on:
    • Algorithm
    • Follow-up
    • End-points
    • Interval
    • Evaluation of the process

• Practical preparing group 2014-2015
  – IT and logistics
  – Automatic randomisation
  – Reservation against HPV arm
  – Screening tests
  – Information to the women, sample takers and laboratories
February to April 2015: Implementation of randomized primary HPV screening in Norway

- Four counties
- Three cytology laboratories in Bergen, Stavanger and Trondheim.
Cobas 4800 HPV-test won the tender competition

- Validation of the method
- Common procedures and cooperation between the three laboratories
- Diagnostic biobanking
- Inter-laboratory reproducibility study

Result
HPV 16 pos or neg
HPV 18 pos or neg
HPV other high risk types pos or negativ (31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68)

Cytotechnologists run the test!
HPV primary screening - criteria

Criteria for inclusion:
1. Birthday on an even number day, from the year she becomes 34 to the year she becomes 70.
2. Screening test (no positive cyt., relevant pos. hist. or HPV last 2 years)
3. Women must live in the counties
4. No wild screening (HPV negative)

Exclusion criteria:
1. Those who say no primary HPV screening
2. Woman who have been treated for CIN 2 +

It was crucial to make an application able to sort the women to either HPV or CYTOLOGY at the time the womans data is registred in our LIS.

Access to the patient history is a necessity!
Screening – two algorithms

Primary cytology (25–69 år)
1. ASC-US/LSIL reflex HPV pos > cytology and HPV within 6-12 months. Repeat cytology: LSIL or HPV pos > col/biopsy
2. ASC-US/LSIL reflex HPV neg > screening in 3 years

Primary HPV (34 – 69 år)
1. Primary HPV pos > reflex cytology pos > col/biopsy
2. Primary HPV neg > report without cytology, screening in 5 years
Summary after one year

• The rate of primary HPV positive is 7 %. Group 2 estimated 8 %
• Number of cytology specimens has been reduced with 25 %
• Number of HPV-tests have increased six times.
• Many algorithms implies a lot of work to ensure correct follow-up, but the algorithm for HPV primary screening is the easiest one.
• Attendance rate after receiving the first reminder letter from the Cancer registry is the same as those who receive a reminder for cytology test.
• Very few say no to HPV primary screening (0,1%) 
• An increase in number of colposcopies and biopsies as expected.
• The implementation will be finalized in 2019 with a report, but the other health regions not involved in this implementation, have been asked to decide which laboratories should do cytology and HPV in the future.
Thank you for your attention